

REMARKS

Claims 11 – 15, 27 – 31, and 34 are cancelled.

Claims 16 and 32 have been rewritten as independent claims including all limitations of their original base claims.

Claims 1, 17, and 33 have been amended to further clarify the nature of Applicants claimed invention. Support for the amendments to claims 1, 17, and 33 can be found, for example, at page 10, lines 15 – 24.

Claims 1 and 8 have been amended to resolve the antecedent basis problem noted by the Examiner. Claims 2, 3, 6, 18, 19, 22, and 24 have also been amended to remove informalities and otherwise clarify the claim language.

Claims 35 – 38 have been added. Support for new claims 35 – 38 can be found, for example, at page 9, line 26 to page 10, line 4. The above amendments add no new matter.

The rejection of claims 1 – 6 and 33 under 35 USC 102(b) over Takehiko, JP 0420626, is respectfully traversed. Takehiko describes a process where solutions are delivered to a wafer sequentially. By contrast, claims 1 and 33 as amended require that the time period for supplying the first process solution overlaps with the time period for supplying the second process solution. Additionally, the nozzle (4) in Takehiko, identified in the Office Action as supplying the second solution, does not supply a solution to the edge of a wafer. Nozzle (4) in Takehiko supplies a photoresist solution. This photoresist solution is supplied to the center of the wafer, and then distributed across the wafer by spinning the wafer at high speed. Thus,

Takehiko also fails to describe two nozzles that each supply a process solution to an edge of a wafer, as required by the claimed invention. For at least these reasons, reconsideration and withdrawal of this rejection are respectfully requested.

The rejection of claims 1 – 7, 17 – 26, and 33 under 35 USC 102(e) over Taniyama et al., US Patent 6,247,479, is also respectfully traversed. Taniyama et al. discloses a cup 20 which apparently serves as a processing chamber during wafer processing. (Col. 6, lines 33 – 44) Fluids exiting cup 20 leaves the cup via discharge ports 20d. As depicted in Fig. 2, discharge ports 20d are not located in the vicinity of the edge of the wafer, but instead are located in the bottom 20b of cup 20. Taniyama does not appear to disclose any other exhaust method for removing fluids from the cup 20. Thus, Taniyama et al. fails to describe a sucking hole provided in the vicinity of the edge portion of said target, as required by the claimed invention. Additionally, with regard to claims 24 – 26, Taniyama does not describe a “blocking member” as required by the claimed invention. For at least these reasons, reconsideration and withdrawal of this rejection are respectfully requested.

The rejection of claims 1 – 6, 8 – 10, and 33 under 35 USC 102(b) over Yoshio et al, JP 06310422 is also respectfully traversed. Yoshio et al describes an apparatus for cleaning the end edges of boards. Yoshio states that the boards to be cleaned have a thin film formed by a rotational coating, but this appears to be a description of the starting condition of the boards prior to being placed in the apparatus described by Yoshio. In fact, it does not appear that the cleaning method and apparatus described in Yoshio involves rotation. This is in contrast to the

claimed invention, which requires rotation of the target. Additionally, with regard to claims 8 – 10, Yoshio does not describe a “blocking member” as required by the claimed invention. For at least these reasons, reconsideration and withdrawal of the rejection are respectfully requested.

The rejection of claims 16 and 32 under 35 USC 103(a) over Takehiko et al., Taniyama et al., or Yoshio et al. in view of Glorioso et al., US patent 3,953,276, and further in view of Kasai et al., US Patent 6,436,193, is also respectfully traversed. The claimed invention requires a third nozzle having a plurality of pipes radially provided on the same plane; and a plurality of holes provided at the side opposite to one surface of the target, wherein the diameter of the holes increases along the length of each of the pipes. Thus, the holes in each pipe have varying diameters along the length of the pipe. By contrast, Kasai et al. appears to be focused on some type of processing chamber with diverging nozzles. Kasai et al. does not appear to discuss a nozzle having a plurality of holes that change in diameter along the length of the nozzle. Thus, this combination of references fails to provide a prima facie case of obviousness for the claimed invention in claims 16 and 32. Reconsideration and withdrawal of this rejection are respectfully requested.

Finally, the rejection of claims 17 – 26 under 35 USC 103(a) over Takehiko et al. or Yoshio et al. in view of Hey et al., US Patent 6,551,488, is respectfully traversed. The deficiencies of Takehiko et al. and Yoshio et al. are noted above. The disclosure in Hey et al. does not overcome these deficiencies. Thus, neither Tekehiko et al., Yoshio et al., nor Hey et al., either alone or in combination,

discloses or suggests all of the elements of the claimed invention in claims 17 – 26.

Reconsideration and withdrawal of this rejection are respectfully requested.

In view of the foregoing amendments and remarks, the application is respectfully submitted to be in condition for allowance, and prompt, favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #010986.51061US).

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Lawrence Carter', is written over a horizontal line.

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